REMARKS

Claims 1-39 are pending in this application and have been subjected to a restriction requirement. Applicant has amended claims 1, 3-9, and 14-20 via the present Amendment to better comply with the Office's requirements as well as to expedite prosecution of the present application.

The Restriction Requirement

The Office required restriction to one of the following groups of inventions under 35 U.S.C. § 121:

Group I: claims 1-20, drawn to a contoured structural member, classified in class 428, subclass 36.91; and

Group II: claims 21-39, drawn to a method for making a contoured structural member, classified in class 156, subclass 189.

The Office argues that Groups I and II are distinct because the product as claimed can be made by another and materially different method: by rotational molding or shaping by extrusion, e.g., spinning. The Office concludes that because the groups of inventions are distinct for these reasons, and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes is proper.

Applicant affirms the election, with traverse, to prosecute the invention of Group I, claims 1-20. Applicant does NOT traverse the Office's classification of the groups of inventions as distinct and entailing different patentability determinations, merely the reasoning behind the Office's classification.

As to restriction between Groups I and II, Applicant disagrees that the product as claimed can be made by the other and materially different method suggested by the Office. The claims of Group I currently recite a contoured structural member comprising a coating. The alternative method proposed by the Office, however, would not make this claimed product. Specifically, the product formed by the Office proposed method would not contain such a coating.

As well, the Office has improperly categorized claims 36-39 as method claims. As apparent from their language, these claims are product claims, albeit product-by-process claims.

Thus, the Office has not established a proper restriction requirement between Groups I and II. Accordingly, Applicant respectfully requests withdrawal of this restriction requirement and examination of all pending claims, or at least modification of the restriction requirement to include claims 36-39 with claims 1-20 of Group I.

Specification

The Office has objected to the specification as not containing brief individual descriptions for each Figure. In response, Applicant has amended paragraph 15 of the specification to provide a brief description for each Figure.

Claim Objections

The Office has objected to claims 1, 6, 8 and 20 as containing grammatical errors. This rejection is moot as these grammatical errors have been corrected.

Rejection – 35 U.S.C. § 112 ¶ 2

The Office has rejected claims 3-5 and 9 under 35 U.S.C. § 112 ¶ 2 for the reasons listed in pages 4-5 of the Office Action.

1. The Office argues that claims 3-4 are indefinite as to what is a "light" and "heavy" metal since there is no official metallurgical standard defining these terms. Applicant respectfully disagrees with this rationale. A fundamental principle contained in 35 U.S.C. § 112 ¶ 2 is that an applicant can be his own lexicographer. He can define in the claims what he regards as his invention essentially in whatever terms, provided those terms are not used in ways that are contrary to the accepted meaning in the art. See *M.P.E.P. § 2173.01.* The definiteness of claim language must be analyzed not in a vacuum, but in light of the specification. *See M.P.E.P. § 2173.02.*

In light of these requirements, the Office has not shown that such terminology does not meet these requirements. The claims recite that the metal-containing materials can be a light (or heavy) metal or alloy thereof. Page 13 of the specification describes specific examples of both light and heavy metals. In light of the examples for each type of metal provided in the specification, the skilled artisan would have understood for certain that the exemplified metals in the specification were respectively light or heavy metals. As well, given the types and numbers of metals disclosed as light and heavy metals, the skilled artisan would also understand the other types of metals that would be light and heavy metals.

Nevertheless, in an effort to expedite prosecution Applicant has amended the claims to remove the term "light" and "heavy" metal.

2. The Office contends claim 5 lacks antecedent basis for the terms inner and/or outer surface. In response, Applicant has amended claim 5 as indicated above.

3. The Office argues that claim 9 is indefinite when reciting "Teflon." In response, Applicant has amended claim 9 as suggested by the Office.

For the above reasons, Applicant respectfully requests withdrawal of this rejection.

Double Patenting

The Office has provisionally rejected claims 1-4 and 6-20 under the doctrine of obviousness-type double patenting over the claims of several co-pending applications in view of Martin (U.S. Patent No. 6,227,252) for the reasons listed on pages 5-9 of the Office Action. In essence, the Office argues that it would have been obvious to combine the coating of Martin with the claims of the co-pending application for the purpose of providing structures having processing affordability and structural stability and ultimate weight stability. The Office has also provisionally rejected claim 5 under the doctrine of obviousness-type double patenting over the claims of several co-pending applications in view of Martin and Casser (U.S. Patent No. 5,945,643) for the reasons listed on pages 9-10 of the Office Action.

Applicant respectfully disagrees with both of these rejections. Martin discloses that the reason for adding the coating (e.g., the release agent) is for facilitating the creation of pores in the core material during the final heat/gas expansion step. *See column 6, lines 20-21.* In the co-pending claims, however, the intermediate layer ribbed structure (honeycomb core) already has voids formed therein when that layer is used in making the claimed structural member. Thus, the skilled artisan would not have been motivated to have combined the releasing agent of Martin with the co-pending claims because there is no need to facilitate pore formation in the co-pending claims.

Thus, the Office has not substantiated a sufficient basis for these grounds of rejection and Applicant respectfully requests withdrawal of these rejections.

Rejection – 35 U.S.C. § 102(e) over Martin

The Office has rejected claims 1-4, 6-10, and 14-20 under 35 U.S.C. § 102 (b) as being anticipated by Martin for the reasons listed on pages 11-12 of the Office Action. Applicant respectfully traverses this rejection.

Martin discloses a structural member containing a sandwich-like structure with a solid metal facing and a porous metal core. *See Abstract.* Time and time again, Martin describes flat sandwich-type structural members and methods of making such flat structures. The only, single description that the undersigned could find of a "non-sandwich" type structural member is at column 6, line 60 where Martin briefly mentions that any desired structural elements (such as cylinders) can be formed. There is no mention of how to form such cylindrical structures. Indeed, the methods (and accompanying Figures) would seem to only describe how to form sandwich-type structures. In fact, Martin only claims a sandwich type structural member. *See claims 1 and 10.* Thus, Martin contains a "non-enabling" disclosure for non-sandwich type structural members and cannot be properly relied on by the Office to reject the present claims. *See M.P.E.P.§ 2121.04.*

Nevertheless, in an effort to expedite prosecution (especially in light of the prosecution of the co-pending application), the claims have been amended as indicated above. The independent claims currently recite a structural member comprising an inner section with a plurality of layers and an outer section with a plurality of outer layers. The Office has not shown that Martin described an inner or outer section with a plurality of layers. Indeed, it would be difficult for the

Office to show that Martin discloses such limitations in light of the disclosure of Martin and how the "shell" of Martin is made.

For the above reasons, the Office has not substantiated that Martin anticipates claims 1- 4, 6-10, and 14-20. Accordingly, Applicant requests withdrawal of this ground of rejection.

Rejection – 35 U.S.C. § 103 over Martin and Casser

The Office has rejected claims 5 and 12-13 under 35 U.S.C. § 103 as being unpatentable over Martin in view of Casser for the reasons listed on pages 13-14 of the Office Action. Applicant respectfully traverses this rejection.

The independent claims currently recite a structural member comprising an inner and outer section with a plurality of layers. As noted above, the Office has not substantiated that Martin teaches a structural member with this recited limitation. Nor has the Office shown that the skilled artisan would have considered such a limitation obvious in light of the disclosure of Martin. Indeed, in light of the manner in which the structural member of Martin is formed, it is doubtful that the skilled artisan would have considered such a limitation to have been suggested by Martin.

Neither has the Office substantiated that Casser teaches or suggests a structural member containing such a limitation. Casser describes and illustrates vibration damping materials and methods of using the same. *See Abstract and Figures.* The Office has not substantiated that Casser teaches the claimed structural member. Nor has the Office has provided any reason to modify the teachings of Casser to obtain a structural member containing an inner and outer section with a plurality of layers. And since the Office has not shown that Casser teach or

suggest this claimed limitation, the Office cannot show that it would have been obvious to modify Martin to include such a limitation.

For the above reasons, the Office has not substantiated that the skilled artisan would have considered claims 5 and 12-13 obvious over the combined teachings of Martin and Casser. Accordingly, Applicant requests withdrawal of this rejection.

Rejection – 35 U.S.C. § 103 over Martin and Reid et al.

The Office has rejected claim 11 under 35 U.S.C. § 103 as being unpatentable over Martin in view of Reid et al. (U.S. Patent No. 5,564,064) for the reasons listed on page 14 of the Office Action. Applicant respectfully traverses this rejection.

The independent claims currently recite a structural member comprising an inner and outer section with a plurality of layers. As noted above, the Office has not substantiated that Martin teaches a structural member with this recited limitation. Nor has the Office shown that the skilled artisan would have considered such a limitation obvious in light of the disclosure of Martin. Indeed, in light of the manner in which the structural member of Martin is formed, it is doubtful that the skilled artisan would have considered such a limitation to have been suggested by Martin.

Neither has the Office substantiated that Reid et al. teach or suggest a structural member containing such a limitation. Reid et al. describe and illustrate a crash attenuation system for absorbing the energy from impact forces. *See Abstract and Figures.* The Office has not substantiated that Reid et al. teach the claimed structural member. Nor has the Office provided any reason to modify the teachings of Reid et al. to obtain a structural member containing an

inner and outer section with a plurality of layers. And since the Office has not shown that Reid et al. teach or suggest this claimed limitation, the Office cannot show that it would have been obvious to modify Martin to include such a limitation.

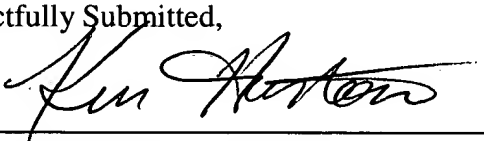
For the above reasons, the Office has not substantiated that the skilled artisan would have considered claims 5 and 12-13 obvious over the combined teachings of Martin and Reid et al. Accordingly, Applicant requests withdrawal of this rejection.

CONCLUSION

For the above reasons, Applicant respectfully requests the Office to withdraw the above grounds of rejection and allow the pending claims.

If there is any fee due in connection with the filing of this Amendment, including a fee for any extension of time not accounted for above, please charge the fee to our Deposit Account No. 18-0013.

Respectfully Submitted,

By 

KENNETH E. HORTON
Reg. No. 39,481

Date: January 23, 2003

APPENDIX A: AMENDMENT TO SPECIFICATION

Please delete paragraph 15 in its entirety and replace it with the following paragraph:

--[14] Figures 1-28 are views of structural members and methods of making the same according to the present invention, in which:

Figure 1 illustrates a structural member in one aspect of the invention;

Figure 2 illustrates a plurality of layers in the inner or outer portion of the structural member in one aspect of the invention;

Figure 3 illustrates exemplary configurations of the ribbed structure of the intermediate portion of the structural member in one aspect of the invention;

Figure 4 illustrates exemplary configurations of the structural member in one aspect of the invention;

Figure 5 illustrates one process for making the structural member in one aspect of the invention;

Figure 6 illustrates the lay-up of individual layers in the inner or outer portion of the structural member in one aspect of the invention;

Figures 7-9 illustrate several processes for making the structural member in various aspects of the invention;

Figures 10 and 11 illustrate exemplary configurations of the structural member in one aspect of the invention;

Figures 12-14 illustrate exemplary structural members in several aspects of the invention;

Figures 15-16 illustrate processes for making the structural member in one aspect of the invention;

Figures 17-18 depict configurations of the structural members in various aspects of the invention;

Figures 19-20 illustrates processes for making the structural member in one aspect of the invention;

Figures 21-23 depict configurations of the structural members in various aspects of the invention;

Figure 24 illustrates a process for making the structural member in one aspect of the invention;

Figures 25-27 depict configurations of the structural members in various aspects of the invention; and

Figure 28 illustrates the lay-up of layers in the inner or outer portion of the structural member in one aspect of the invention.

Figures 1-28 presented in conjunction with this description are views of only particular—rather than complete—portions of the structural members and methods of making the same according to the invention.--

APPENDIX B: AMENDMENT TO CLAIMS

1. (Amended) A contoured structural member, comprising:

[at least one contoured inner layer] an inner section containing a plurality of layers comprising a composite material or a metal-containing material;

[at least one contoured outer layer] an outer section containing a plurality of layers comprising a composite material or a metal-containing material;

at least one intermediate layer having a ribbed structure connecting the [at least one] inner [layer] and the [art least one] outer [layer] sections; and

a coating.

3. (Amended) The structural member of claim 1, wherein the [metal-containing material is a light metal or alloy thereof] inner section contains both a composite material and a metal-containing material.

4. (Amended) The structural member of claim 1, wherein the [metal-containing material is a heavy metal or alloy thereof] outer section contains both a composite material and a metal-containing material.

5. (Amended) The structural member of claim 1, wherein the coating is located on the outer surface of the structural member, the inner surface of the structural member, or both.

6. (Amended) The structural member of claim 1, wherein the coating is located between the [at least one] inner [layer] section and the at least one intermediate layer, between the [at least one] outer [layer ad] section and the at least one intermediate layer, or both.

7. (Amended) The structural member of claim 1, wherein the coating is incorporated within the [at least one] inner [layer] section, within the at least one intermediate layer, within the [at least one] outer [layer] section, or any combination thereof.

8. (Amended) The structural member of claim 1, wherein the coating modifies the friction, magnetic, chemical properties, or conductivity properties of the [at least one] inner section, the at least one intermediate layer, the [at least one] outer [layer] section, [of] or any combination thereof.

9. (Amended) The structural member of claim 1, wherein the coating comprises [Teflon] polytetrafluoroethylene.

14. (Amended) The structural member of claim 1, wherein both the [at least one] inner [layer] and the [at least one] outer [layer] sections comprise a composite material.

15. (Amended) The structural member of claim 1, wherein both the [at least one] inner [layer] and the [at least one] outer [layer] sections comprise a metal-containing material.

16. (Amended) The structural member of claim 1, wherein the [at least one] inner [layer] section comprises a composite material and the [at least one] outer [layer] section comprises a metal-containing material.

17. (Amended) The structural member of claim 1, wherein the [at least one] inner [layer] section comprises a metal-containing material and the [at least one] outer [layer] section comprises a composite material.

18. (Amended) A contoured structural member, comprising:

[at least one contoured inner layer] an inner section containing a plurality of layers comprising a composite material or a metal-containing material;

[at least one contoured outer layer] an outer section containing a plurality of layers comprising a composite material or a metal-containing material;

at least one intermediate layer having a honeycomb structure connecting the [at least one] inner [layer] and the [art least one] outer [layer] sections; and

a coating modifying the friction, magnetic, chemical resistance, or conductivity properties of the [at least one] inner section, the at least one intermediate layer, the [at least one] outer [layer] section, [of] or any combination thereof.

19. (Amended) A closed, contoured structural member, comprising:

[at least one contoured inner layer] an inner section containing a plurality of layers comprising a composite material or a metal-containing material;

[at least one contoured outer layer] an outer section containing a plurality of layers comprising a composite material or a metal-containing material;

at least one intermediate layer having a honeycomb structure connecting the [at least one] inner [layer] and the [art least one] outer [layer] sections; and

a coating modifying the friction, magnetic, chemical resistance, or conductivity properties of the [at least one] inner section, the at least one intermediate layer, the [at least one] outer [layer] section, [of] or any combination thereof.

20. (Amended) A closed, contoured structural member, comprising:

[at least one contoured inner layer] an inner section containing a plurality of layers comprising a composite material or a metal-containing material;

[at least one contoured outer layer] an outer section containing a plurality of layers comprising a composite material or a metal-containing material;

at least one intermediate layer having a honeycomb structure being substantially contiguous with the [at least one] inner [layer] section and the [art least one] outer [layer] section; and

a coating modifying the friction, magnetic, chemical resistance, or conductivity properties of the [at least one] inner section, the at least one intermediate layer, the [at least one] outer [layer] section, [of] or any combination thereof.